

ANABOLIC/CATABOLIC INDEX (ACI) INTERPRETATION

Background:

The Anabolic/Catabolic Index (ACI) was developed by Univera Pharmaceuticals, Inc. in 1999 in order to further clarify and quantify aspects of the Metabolic Model of Aging. The following provides a review of frequently asked questions about the Metabolic Model of Aging and the ACI test. We recommend reading this information prior to taking your test.

Question 1: What is the Metabolic Model of Aging?

Answer: It is an understanding that many signs of aging fundamentally a shift from youthful anabolic (high energy, repair & rebuild) metabolism to increasing levels of catabolic (low energy, break-down, wear-down) metabolism. Other models of aging, such as wear and tear, free radicals, enzyme depletion and even accumulated genetic error, can all be seen as part of this metabolic shift. Importantly, anabolic metabolism determines a great deal more than one's muscle mass. It influences immunity, protein synthesis, cell proliferation, bioenergetics, cell communication, endocrine function, and even mind, mood and behavior.

Question 2: What precisely does the ACI test measure?

Answer: We are measuring a group of anabolic biomarkers that appear in the urine as a result of rebuild, repair and restore activity in the body. These compounds, known as 17-Ketosteroid Sulfates (17-KS-S), were found to parallel very closely recovery from illness, injury and stress. The equipment utilized to determine your ACI score can detect these anabolic metabolites in amounts less than one billionth of a gram.

Question 3: How does that relate to aging?

Answer: The signs of aging are more important than one's chronological age. These signs depend on the relationship between the destructive (catabolic) and repair (anabolic) activity of tissues, cells, and molecules

within the body. It defines how fast you are experiencing the various signs of aging.

Normally, the repair/break-down (ACI) ratio declines because older individuals are less able to repair accumulated damage. This unrepaired damage in turn promotes further damage. But, research is now showing that reliable and proven interventions can help restore a more-anabolic repair metabolism and help catabolic breakdown. The Oasis Anti-Aging System has been designed to accomplish this and one's progress can be measured and tracked with the ACI test.

Question 4: If Oasis is conducting the ACI test and selling anti-aging products, isn't there a possible conflict of interest?

Answer: First and foremost, Oasis does not conduct any aspect of the ACI test. This test was developed and is performed by Univera Pharmaceuticals, Inc. (UPI) following very strict FDA-mandated protocols from intake, testing, and quality control to reporting of test results. To ensure anonymity, urine samples are coded upon receipt and at no time in the testing procedure is the identity of the sample known. Oasis does, however, prepare the final report based on the coded results it receives from UPI and mails individual reports to each customer.

Question 5: What Quality Controls are employed to maintain accuracy?

Answer: UPI runs external standards after every test. Split samples are run under different numbers and compared twice a day for reproducibility. Creatinine tests are run in duplicate with scientific standards run every fourth test. Retained urine samples are kept on every patient, frozen at -70°C for 2 months.

Question 6: Since DHEA is partially excreted as a 17-Ketosteroid Sulfate, and the Longevity Signal Formula contains DHEA, how do you eliminate a possible error in the ACI results?

Answer: Oral supplementation with DHEA may produce both real and artificial elevations in ACI. It has been scientifically proven that a 12-hour washout period is adequate to remove any DHEA that would occur in the urine from an oral dose. Thus, we can assure clients, researchers and clinicians that ACI is measuring true upregulation of anabolic activity.

Washout instructions for those taking the Oasis Longevity Signal Formula

Individuals to be tested should take their PM dose of Longevity Signal Formula no later than 9PM the night before they plan to collect their sample. They should skip the AM dose the following day and collect urine as close to 9AM as possible. This 12-hour washout is sufficient to prevent excreted DHEA metabolites from appearing in the 17-KS-S assay.

Question 7:

Are there prescription drugs that will alter ACI test results?

Answer: As we expand our database to include individuals being treated for a variety of health disorders, we are finding that some Rx drugs do affect ACI scores. While this invalidates the comparison of results to age normals, the ACI score can still be extremely valuable as a benchmark to measure improvements in anabolic metabolism over time.

Drugs That Can Artificially Lower ACI Scores:

ACE Inhibitors:

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| Altace | Captopril |
| Lotensin | Monopril |
| Vasotec | Zestril |
| Lotrel | Prinzide |
| Cozaar | Lanoxin |

Anti-Androgens:

Casodex
Eulexin

Calcium Channel Blockers:

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| Adalat | Calan |
| Cardizem | Norvasc |
| Plendil | Procardia |
| Sular | Vascor |

Cholesterol-Lowering Drugs (HMG-CoA Reductase Inhibitors):

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| Pravachol | Baycol |
| Lescol | Lipitor |
| Mevacor | Zocor |

Diuretics:

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| Aldactazide | Dyazide |
| Maxzide | Microzide |
| Lasix | Aldactone |
| Diuril | Enduron |

Sympathomimetics:

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| Albuterol | Alupent |
| Brethine | Maxair |
| Proventil | Ventolin |

Ulcer / GERD Drugs /

H2 Receptor Antagonists:

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| Axid | Pepcid |
| Tagamet | Tritec |
| Zantac | |

Miscellaneous:

Creatine monohydrate *
Creatine dihydrate *

Drugs That Can Artificially Raise ACI Scores:

Bronchodilators:

Atrovent
Combivent

Hormones:

DHEA *
Anadrol **
Androderm * *
Oxandrin **
Estratest **
Testoderm **
Norandro **
Androstenedion **
Sterinol **

Steroid Anti-Inflammatory Agents:

Aerobid
Azmecort
Beclovent
Flovent
Vanceril

Miscellaneous:

Insulin
Nilandron
Teslac
Lupron
Zoladex

* Accurate ACI results can be obtained after a 12-hour washout

** Accurate ACI results can be obtained after a 7-day washout

Note: Oasis Wellness Network does not recommend that you stop taking any prescribed medication without first consulting with your personal physician.

Question 8:

What if I notice significant improvements on the Oasis products, but it took me longer than others? What if my ACI test improved, but I'm not feeling younger?

Answer: Here's the three-part answer to that question:

1. Be patient. It's just a matter of time. Oasis products work by supporting a metabolic shift that increases anabolic (rebuild, repair) activity in your body. Your improvement on the ACI test tells us that this is happening, but as you can imagine, the resulting repair does not happen overnight.

According to the Metabolic Model of Aging, the human body is replacing about 300 billion cells per day. The key to any anti-aging strategy is to make sure that these new cells are healthier and stronger than the ones they replace.

Now let's look at the timing. You have 100 trillion cells in your body. Some, like red blood cells, are replaced quickly while others, like the collagen matrix of tendons and bone, are replaced very slowly. Thus, improvements take time, so once again, be patient. This is an exciting and worthwhile process.

2. Be sensitive. Often, changes that indicate progress are subtle. How do you feel when you wake up in the morning? When I ask this question, many people reply, "Gee, I just realized that I'm waking up before the alarm clock goes off... and I'm more alert than I used to be." Also, be sensitive to your energy level at the end of a busy day, or improvements in your ability to cope with stress.

3. Be diligent. Best results cannot be achieved unless you take the products as directed. In addition, if you are currently using Hilltop Gardens™ Aloe Gold, you may want to increase your use to 2 oz., twice a day. This powerful anti-catabolic concentrate also enhances anabolic repair by sup-

porting the production of collagen throughout the body. These are very significant advantages that over time will result in a more youthful and energetic body and mind.

Thousands of individuals in every age group have used Oasis products with great success. If your progress is a bit slower than some, please know that it is no less sure.

Question 9:

What if I get a low ACI score?

Answer: There are a number of reasons why someone who has been diligent regarding diet, exercise and nutritional supplementation might test low on the ACI test.

1. ACI is a ratio of anabolic 17-KS-S metabolites to urinary creatinine. Thus, there are two ways to achieve a low score; either 17-KS-S levels were low, or creatinine was high. When both are high, of course, it simply means that the urine sample was highly concentrated. But, when 17-KS-S levels are normal or low, and creatinine is greater than 1.75, we send you a letter with your test results explaining why your creatinine may have been elevated. Strenuous exercise, a high meat diet, inadequate hydration and the use of creatine supplements can all cause a temporary elevation of urinary creatinine, resulting in an artificially low score.

2. Inadequate protein intake. We have identified two cases in which an outwardly healthy individual consistently tested low on the ACI, apparently due to inadequate protein intake. Diet analysis disclosed that in both cases, daily total protein was less than 0.5 grams per kg body weight. The relationship between protein malnutrition and ACI is not fully understood, but most likely stems from inadequate tissue repair and subsequent catabolism of endogenous protein. In both cases, ACI scores improved when protein intake was increased to 1.0 gram per kg body weight.

3. 17-KS-S levels are sensitive to stress. Few people fully understand

the destructive power of stress. A one-page questionnaire developed by two epidemiologists (Holmes and Rahe) has been used for decades to evaluate the effects of stress on human health. It has stood the test of time (and a few hundred research papers) because it can predict, with uncanny accuracy, whether an individual will develop a significant illness within the next year. This questionnaire simply asks the individual to circle the life changes that they have experienced in the last 12 months.

Now, Holmes and Rahe knew nothing about how stress hormones depress DHEA levels and suppress immunity. They just knew from observation that human beings have difficulty coping with change. Change means more stress and more stress means a greater likelihood of illness and disease. But, even "good" events such as marriage, retirement, holidays and vacations can also mean more stress. Any activity or event that causes a readjustment of time or attention is perceived by the body as stress.

Millions of Americans have elevated stress hormone levels for 18 out of every 24 hours. In nearly 25% of fatal heart attacks, the victim, upon autopsy, is found to have clear arteries. What caused the heart attack? Stress...leading to compromised arterial function. For people who have a healthy lifestyle but who are forgetting that stress dramatically accelerates catabolic activity, the ACI test can be a valuable wake-up call.

One final note on low scores: The ACI test is a snapshot of one's metabolic efficiency. It is not a diagnosis. We encourage people not to "become" their score, but to use the information to monitor progress.

Question 10: *(continued from page 3)*

**On multiple tests, will I see a linear rise in my ACI scores?
And will my scores plateau?**

Answer: Like many sensitive tests, ACI is affected by a number of variables including stress, sleep quality, hydration, diet, menstrual cycle and exercise. The current ACI instruction sheet covers these issues, and consecutive testing shows that attention to these details will produce the most consistent test scores. Still, it is unlikely that all of these factors will remain static over time, and so we encourage you to look for a trend line rather than a linear increase. Figure 1 below illustrates how an individual's ACI score might vary over the period of one year.

There will also be a point where scores plateau. In most cases, this occurs when you have reached an excellent score for your metabolic profile.

Final Thoughts

There is no instant fix. People have no problem understanding preventive maintenance for their car. But even then, most people are motivated to act (the full schedule of oil changes, lubes, tire rotation and tune-ups) due to the threat of loss, as failure to take these preventive measures voids the warranty.

The human body has no warranty, and in fact appears to run acceptably well without a lot of attention to preventive care. Thus, when they hit the big 5-0, the majority of Americans are unfit, overweight, tired, and dealing with one or more chronic health problems. Oasis products have been designed as preventive maintenance for the human body.

Consistent consumption, over time, will (to continue with the automobile metaphor referenced above) help you run better for longer. In the past, such programs had to be taken "on faith". You took nutritional supplements because you believed they would help. Today, with the ACI test, you can validate your choice, determination and success with a reliable, scientifically sound test.

Onward and Upward,



Stephen A. Cherniske, M.Sc.

Trend vs. Linear Increase

